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09/505,735	02/16/2000	Alessandro Muti	MFPC.68276	6053

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EXAMINER
AVELLINO, JOSEPH E

ART UNIT	PAPER NUMBER
2143	

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

09/505,735

**Applicant(s)**

MUTI ET AL.

**Examiner**

Joseph E. Avellino

**Art Unit**

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

1. Claims 1-10, and 12-31 are presented for examination.

***Allowable Subject Matter***

2. The Examiner reiterates that the features found in the specification as discussed in the interview (i.e. updating the threshold sizes when the file size transferred is above a predefined threshold limit, in conjunction with how the utilization is obtained, as described at page 14, line 15 to page 15, line 3) would overcome the Rakavy in view of Sawyer rejection outlined below.

***Claim Rejections - 35 USC § 101***

3. In light of the arguments and amendments to the claims, the rejections under this statute have been withdrawn.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-9, 14-27, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy et al. (USPN 5,913,040) (hereinafter Rakavy) in view of Sawyer (USPN 5,828,737)

4. Referring to claim 1, Rakavy discloses a method of transferring a set of data over a network between a local device and a remote device comprising:

monitoring the level of bandwidth utilization of the local computing device (col. 14, lines 8-9);

calculating a threshold level of utilization as a function of the monitored level of utilization of the local computing device (col. 13, line 66 to col. 14, line 7); and

if the actual level is less than the threshold level, transferring at least a portion of the set of data over the network between the local computing device and the remote computing device (col. 14, lines 16-21).

Rakavy does not disclose identifying a maximum monitored level of actual utilization and that the threshold level of utilization is calculated as a function of the maximum monitored level of utilization. In analogous art, Sawyer discloses another method of monitoring data bandwidth consumption from one device to another device (col. 5, lines 35-36) and identifying a maximum monitored level of actual utilization of a historical time period (i.e. maximum amount 48 of each time interval) (col. 5, lines 45-54). It would have been obvious to one of ordinary skill in the art to combine the teaching of Rakavy with Sawyer by replacing the line utilization determination techniques described in Rakavy's Polite agent (i.e. time line is in use) with those described in Sawyer (i.e. measured maximum amounts of bandwidth), thereby providing a threshold as described in Rakavy with the maximum bandwidth used as described in Sawyer, in order to more accurately determine the total bandwidth used in a particular

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transmission, rather than using the particular communication duration as supported by Sawyer (col. 1, line 66 to col. 2, line 4).

5. Referring to claim 2, Rakavy discloses the client receives the data over the network from a server (col. 5, lines 32-39).

6. Referring to claim 3, Rakavy discloses said monitoring occurs at the interface between the client and the network (col. 14, lines 8-15).

7. Referring to claim 4, Rakavy discloses the network is the Internet (col. 5, lines 8-9).

8. Referring to claim 5, Rakavy discloses the threshold level is equal to a predetermined percentage of the maximum monitored level (col. 13, lines 35-44).

9. Referring to claim 6, Rakavy discloses the set of data includes a software update (col. 3, lines 60-62; col. 15, lines 22-27).

10. Referring to claim 7, Rakavy discloses repeating at least said monitoring step each time a portion of the set of data is received (Figure 6, reference character 43 and related parts of the disclosure).

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11. Referring to claim 8, Rakavy discloses separately receiving a plurality of discrete portions of the set of data over the network when the actual level is less than the threshold level (col. 14, lines 32-60).

12. Referring to claim 9, Rakavy discloses a method of transferring a set of data over a network as stated in the claims above. Rakavy does not disclose incrementing a counter each time a discrete portion of the data is received over the network. "Official Notice" is taken that both the concept and advantages of providing for incrementing a counter each time a portion of data is received is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to provide incrementing a counter each time a portion of data is received to the combined system of Rakavy and Riggan to keep an accurate track of the number of packets received for this data set.

13. Referring to claim 14, Rakavy discloses suspending the receipt of discrete portions of the data if the level of actual utilization becomes greater than the threshold level (col. 14, lines 16-21).

14. Referring to claim 15, Rakavy discloses resuming the receipt of discrete portions of the data from the point of suspension when the level of actual utilization becomes less than the threshold level (col. 13, lines 23-34).

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15. Referring to claim 16, Rakavy discloses a method of transferring a set of data over a network as stated in the claims above. Rakavy further discloses repeating said monitoring step each time a portion of the set of data is received (Figure 6, reference character 43 and related parts of the disclosure). Rakavy does not disclose identifying a maximum monitored level of actual utilization and that the threshold level of utilization is calculated as a function of the maximum monitored level of utilization. In analogous art, Sawyer discloses another method of monitoring data bandwidth consumption from one device to another device (col. 5, lines 35-36) and identifying a maximum monitored level of actual utilization of a historical time period (i.e. maximum amount 48 of each time interval) (col. 5, lines 45-54). It would have been obvious to one of ordinary skill in the art to combine the teaching of Rakavy with Sawyer by replacing the line utilization determination techniques described in Rakavy's Polite agent (i.e. time line is in use) with those described in Sawyer (i.e. measured maximum amounts of bandwidth), thereby providing a threshold as described in Rakavy with the maximum bandwidth used as described in Sawyer, in order to more accurately determine the total bandwidth used in a particular transmission, rather than using the particular communication duration as supported by Sawyer (col. 1, line 66 to col. 2, line 4).

Referring to claim 17, Rakavy discloses a method of transferring a set of data over a network as stated in the claims above. Rakavy does not disclose estimating the maximum level of utilization during receipt of the set of data by calculating an average level of utilization for the set of data upon repeating said monitoring step a

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predetermined number of times during receipt of the set of data. In analogous art, Sawyer discloses estimating the maximum level of utilization during receipt of the set of data by calculating an average level of utilization (i.e. summing the maximum amounts to determine an estimate) (col. 5, lines 45-50). It would have been obvious to one of ordinary skill in the art to combine the teaching of Rakavy with Sawyer by replacing the line utilization determination techniques described in Rakavy's Polite agent (i.e. time line is in use) with those described in Sawyer (i.e. measured maximum amounts of bandwidth), thereby providing a threshold as described in Rakavy with the maximum bandwidth used as described in Sawyer, in order to more accurately determine the total bandwidth used in a particular transmission, rather than using the particular communication duration as supported by Sawyer (col. 1, line 66 to col. 2, line 4).

16.

17. Referring to claim 18, Rakavy discloses receiving at least a portion of the set of data over the network if the actual level is less than the threshold level for the set of data (Figure 6).

18. Referring to claim 19, Rakavy discloses receiving at least a portion of a second set of data over the network if the actual level is less than the threshold level for the set of data (col. 14, lines 32-60).



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19. Referring to claim 20, it is inherent that the combined system of Rakavy and Garg has a computer-readable medium having computer executable instructions because it instructs the computer in the steps to complete the method.

20. Referring to claim 21, Rakavy discloses a computer system having a memory, an operating system and a central processor being able to execute the instructions stored on the computer-readable medium (col. 4, lines 46-67).

21. Referring to claims 29 and 30, Rakavy discloses the client machine receives the data over the network without substantially interfering with any other network activity (Rakavy discloses downloading the advertisements in a background mode over a communications link, which, as it is well known in the art, is designed to substantially reduce interference with other network activities that is user-oriented) (e.g. abstract).

22. Claims 22-27, and 29-31 are rejected for similar reasons as stated above. Furthermore Rakavy in view of Sawyer discloses monitoring a changing rate of the amount of data communicated through a device (Sawyer, monitoring maximum levels between various time periods; col. 5, lines 29-54);

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy in view of Sawyer as applied to claims 1 and 7-9 above, and further in view of Watanabe et al. (USPN 6,285,662) (hereinafter Watanabe).

23. Referring to claim 10, Rakavy in view of Sawyer disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Sawyer do not disclose the size of the discrete portions of the data is a function of the value of the counter. Watanabe discloses the size of the discrete portions of the data (contention window) is a function of the value of the counter (retransmission attempts) (col. 4, lines 59-63). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Watanabe with the system of Rakavy and Sawyer for improved throughput rates and power consumption performance of the sending station as disclosed in Watanabe (col. 1, lines 19-21).

24. Referring to claim 11, Rakavy in view of Sawyer disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Sawyer do not disclose increasing the size of the discrete portions of the data when the value of the counter is greater than a predetermined value. Watanabe discloses increasing the size of the discrete portions of the data (contention window) when the value of the counter (retransmission attempts) is greater than a predetermined value (col. 5, lines 2-7). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Watanabe with the system of Rakavy and Sawyer for improved throughput rates and power consumption performance of the sending station as disclosed in Watanabe (col. 1, lines 19-21).

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Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy in view of Sawyer as applied to claims 1 and 7-9 above, and further in view of Elzur (USPN 6,427,169).

25. Rakavy in view of Sawyer disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Sawyer do not disclose clearing the counter after receiving all of the plurality of discrete portions of the data over the network. Elzur discloses clearing the counter after receiving all of the plurality of discrete portions of the data over the network (col.9, lines 29-31). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Elzur with Rakavy and Garg to efficiently monitor the number of packets received for the data flow while minimizing the amount of memory space used.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy in view of Sawyer as applied to claims 1 and 7-9 above, and further in view of Kalkunte et al. (USPN 6,078,591) (hereinafter Kalkunte).

26. Rakavy in view of Sawyer disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Sawyer do not disclose clearing the counter if the level of actual utilization becomes greater than the threshold level. Kalkunte discloses clearing the counter if the level of actual utilization becomes greater than the threshold level (col. 8, line 59 to col. 9, line 7). It would be obvious to a

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person of ordinary skill in the art at the time the invention was made to combine the teaching of Kalkunte with Rakavy and Garg to efficiently monitor the bandwidth utilization of the system and to transfer packets of data according to the monitored bandwidth.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buch et al. (USPN 6,463,468) (hereinafter Buch) in view of Rakavy in view of Sawyer.

27. Buch discloses a method of communicating between a client process and a server process over a network, the method comprising:

- a. issuing to the server process a first download request which identifies a file and which request that the server process download a first segment of the file over the network (col. 12, lines 25-30);
- b. downloading, by the server process, the first segment of the file (col. 12, lines 32-34);
- c. issuing to the server process a further download request which is associated with the file and which requests that the server process download a further segment of the file over the network, provided the actual network bandwidth utilization is less than a threshold level (col. 12, lines 25-50);
- d. downloading, by the server process, the further segment of the file (col. 12, lines 39-42; Figure 11);

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- e. repeating steps (c) and (d) until the server process has downloaded each segment of the file over the network (col. 12, lines 35-50).

Buch does not disclose that the threshold level is calculated as a function of a maximum monitored level of actual network bandwidth utilization. Rakavy in view of Sawyer disclose calculating a threshold level as a function of a maximum monitored level of actual network bandwidth utilization (see above rejections). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Buch with Rakavy and Garg to streamline the system, increasing the efficiency by allowing "in-use" periods but low utilization to be harnessed to download files, resulting in increased throughput and less overhead.

### ***Response to Arguments***

- 28. Applicants arguments dated December 3, 2007 have been fully considered but they are moot in view of the new grounds of rejection presented above.

### ***Conclusion***

- 29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph E. Avellino/  
Joseph E. Avellino, Primary Examiner  
January 3, 2008